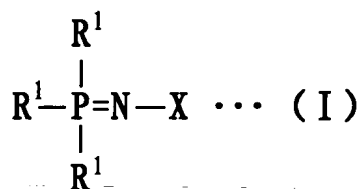


CLAIMS

1. An additive for a non-aqueous electrolyte of a secondary battery characterized by comprising a phosphazene derivative represented by the following formula (I):



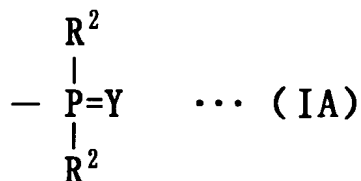
5 (wherein R^1 is independently a halogen element or a monovalent substituent; and X is an organic group containing at least one element selected from the group consisting of carbon, silicon, nitrogen, phosphorus, oxygen and sulfur).

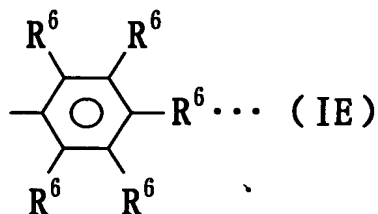
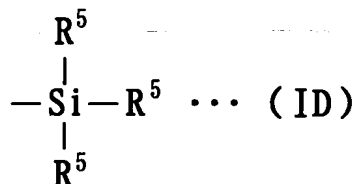
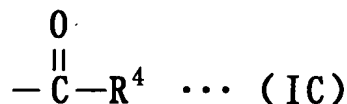
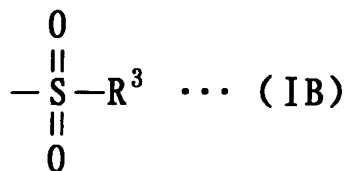
2. An additive for a non-aqueous electrolyte of a secondary
10 battery according to claim 1, wherein at least one of R^1 s in the formula (I) is a halogen.

3. An additive for a non-aqueous electrolyte of a secondary battery according to claim 2, wherein the halogen is fluorine.

4. An additive for a non-aqueous electrolyte of a secondary
15 battery according to claim 1, wherein R^1 in the formula (I) is any one of an alkoxy group, a phenoxy group, an alkyl group, an aryl group, an acyl group, an amino group, an alkylthio group and an arylthio group.

5. An additive for a non-aqueous electrolyte of a secondary battery according to claim 1, wherein X in the formula (I) is
20 represented by any one of the following formulae (IA), (IB), (IC), (ID) and (IE):





(in the formulae (IA), (IB), (IC), (ID) and (IE), R^2 , R^3 , R^4 , R^5 and R^6 are independently a halogen element or a monovalent substituent; and Y is an organic group containing at least one element selected from the group consisting of oxygen, sulfur, carbon, silicon, nitrogen and phosphorus).

6. A non-aqueous electrolyte secondary battery comprising a non-aqueous electrolyte containing an additive for a non-aqueous electrolyte of a secondary battery as claimed in any one of claims 1 to 5 and a support salt, a positive electrode, and a negative electrode.
7. A non-aqueous electrolyte secondary battery according to claim 6, wherein a content of the phosphazene derivative in the non-aqueous electrolyte is not less than 1 volume%.
8. A non-aqueous electrolyte secondary battery according to claim 7, wherein the content of the phosphazene derivative in the non-aqueous electrolyte is not less than 2 volume%.

9. A non-aqueous electrolyte secondary battery according to claim 8, wherein the content of the phosphazene derivative in the non-aqueous electrolyte is not less than 5 volume%.

10. A non-aqueous electrolyte secondary battery according to
5 claim 9, wherein the content of the phosphazene derivative in the non-aqueous electrolyte is not less than 10 volume%.